1939-43 File No. 3898/361

B CLASS

P.W. DEPARTMENT

E BRANCH

Subject:— Geological Survey of India.
Utilization of the Services of the

B(K)'43

E B

File No. 3898/361

Ltd. Scott. 88p. 24 A

G.R., G.D., No. 2408, dated 22-6-22.] Std. Sectt. 78 e.

Correspondence

DOCKET SHEET

Subject :—

File No. 3898/36 I

P. W.

DEPT.

E.

BRANCH.

References :—

Copies of the original file 151(m) 1943 are kept in this file

original files are supplied which are in file Nos. 33, 93-96, 111, 128, 147, 151-153 332 & 240.

To whom sent.	Notes and instructions.

(Copies of letter from the Government of India, Department of Labour, No. M. 153, dated 1st July 1939).

Subject.--Utilisation of the services of the Geological Survey of India.

I am directed to say that it has been brought to the notice of the Government of India that the services of the Geological Survey of India are not being utilized by the Provincial Governments to any considerable extent, probably because particulars of that Department's activities and its capacity to render useful service to the Provinces are not very widely known. The Geological Survey of Inida with its long experience of geological investigations of various kinds is eminently fitted to render valuable service to Provincial Governments in many of their investigations. To give the Provincial Governments an idea of the functions of the Geolpgical Survey, I am to enclose a note* on the subject and to say that the Director of the Survey will be glad to undertake any mineral or economic enquiry or investigation which the Provincial Government may desire to entrust to his Department.

No. 1281-G/39.

REVENUE DEPARTMENT.

Bombay Castle, 14th August 1939.

Copies forwarded for information to -

all Commissioners of Divisions,
all Collector of Districts,
the Director of Agriculture,
the Chief Conservator of Forests,
all Conservators of Forests,
the Director of Public Instruction,
the Director of Industries,
the Director of Public Health
the Consulting Public Health Engineer,
the Consulting Surveyor to Government,
all Superintending Engineers,

all Executive Engineers,

the Electrical Engineer to Government,

the Educational Department,

the General Department, and

the Public Works Department.

*Printed as an accompaniment to this Memorandum.

By order of the Governor of Bombay,

V. SHANKAR,

Under Secretary to Government.

3. The regular field work of the Department is supplemented by work at headquarters involving the study of specimens, completion of field maps and the writing of reports. The results of mineralogical and petrographical study often require confirmation by chemical investigation. For this purpose a chemical laboratory has been provided in which specimens of minerals, ores and rocks sent in by the public for determination are also examined. As a rule it is not possible to make quantitative determinations, but specimens are identified in return for the name of the precise locality from which they have been obtained and and this information is kept confidential if so desired. After study, the specimens collected in the field are stored in the Indian Museum for future reference, to which the public (including students) have access. In all branches of Geological work, it is necessary to compare new results with those previously obtained both in India and abroad and for this purpose a library is maintained in the Department. This library is open to those who wish to consult geological and mining publications.

4. The results of the investigations and researches of the Department are published in three series of publications. These are----

(a) Memoirs which are devoted to the more complete surveys, dealing either with a particular region or with a particular mineral;

(b) Records which consist of shorter papers on stratigraphical, mineralogical, petrological or palaeontological subject;

(c) Palaeontologia Indica containing the result of Palaeontological work with numerous illustrative plates.

Copies of these publications are available on sale with the Manager of Publications, Delhi.

5. The advice of the Geological Survey of India is obtained by the Central Government on all questions of mineral policy. In letter, No.M.75, dated the 6th January 1938, the Provincial Governments were informed that the advice of the Geological

Survey.....

Accompaniment to Government Memorandum, No. 1281-G/39, dated 14th August 1939.

A note on the constitution and functions of the Geological Survey of India.

The Geological Survey of India is one of the oldest Geological Surveys in the world. It was initiated in 1845 with a view to make a geological examination of the coal formations of India in order to provide accurate information on the mode of occurrence of the coal seams and thus enable mining operations for the extraction of coal to be conducted with knowledge and confidence. By 1857, the activities of the Geological Survey of India included a systematic geologocal survey of the whole of India as well as special investigations in connection with mineral deposits. The gazetted cadre of the Department at present consists of the following posts:-

1. Director	...	...	...	1
2. Superintending Geologists	...	...	...	4
3. Geologists	...	...	...	12
4. Chemist	...	...	...	1
5. Assistant Geologists	...	...	...	10

2. The Primary function of the Geological Survey of India is to investigate and estimate the mineral resources of the country. The fundamental work underlying such investigations is a thorough comprehension of the geological structure of the country and for this purpose a systematic field geological survey is undertaken and geological maps are prepared. From the data thus obtained, it is possible almost automatically to locate the possible sources of mineral wealth. A considerable portion of the mineral wealth of India has been discovered direct by the Department while of the remainder (excluding Mysore which maintains its own Geological Department) the discoveries have been in a large measure rendered possible by the work of the Department.

Survey will be readily available to them in connection with the Mining Rules or other mining matters and that any references on such matters should be addressed to the Government of India, Department of Labour.

6. The functions of the Geological Survey of India are not confined to the investigation and estimation of mineral Resources. The Department is prepared to advise and is frequently consulted on problems of water-supply, sites for storage dams and reservoirs, location of tunnels and bridge foundations, stability of hillsides, suitability of stone for building and road metal and other engineering aspects of geology. The Department has also been paying considerable attention in recent years to questions of earthquake danger, flood control and drainage on the one hand and the smelting of iron-ore, cement manufacture and the generation of electricity from coal on the other land. The Department also undertakes to present collections of minerals, rocks and fossils to schools and colleges and to give lectures to students and at times to the public with a view to popularise the study of geology.

7. The chief aim of the Geological Surveysis the development of the mineral resources of India. As mineral development is a Provincial subject under the new constitution, the work of the survey is done largely for the benefit of the Provinces. Every year befor the programme of the field surveys is made, each Provincial Government is asked whether any geological investigation mineral survey or engineering enquiry is desired in the Province during the regular field season. When any such work has to be done, it is included in the programme of work and is carried out as a normal work of the Department without any charge. But if any special problem has to be dealt with which does not come under the regular operations of the Department, e.g. a mineral survey of a particular area or an enquiry connected with a great engineering project, a charge is made for the services of the officer deputed for such work.

Copy of letter from the Director, Geological Survey of India, No.6195, dated 18th May 1940.

Subject:-Field season programme of the Geological Survey of India for 1940-41.

I have the honour to state that the programme of the Geological Survey of India for the coming field season 1940-41 is now under consideration and would request that I may kindly be informed not later than the last week of July, 1940, if there is any special investigation that you desire to be included in the programme. Proposals of any new work to be considered may please be sent on to me as soon as they have been received by you.

Copy of letter from the Director, Geological Survey of India, No.6208, dated 18th May 1940.

Subject:Field season Programme of the Geological Survey of India for 1940-41.

I have the honour to draw your attention to my letter No.6195 dated the 18th May 1940, and to the question of geological advice which your Government may require during the seasons 1940-41 the field work for which begins in October.

2. I will be preparing the field programme of work of for the Geological survey of India for 1940-41 in June and will be very pleased to consider any work that you desire carried out by this Department.

3. May I add that I contemplate placing an officer of the Geological Survey of India at the disposal of your Government as Geological Adviser who will be in charge of investigations during 1940-41.

4. Any work that wer can undertake will be done as early as possible, according to its importance, and that no charge

will be made for it if it is included in our field season programme.

5. I would remind you that though we at present concentrate on assisting in the discovery and development of mineral deposits, we also deal with problems of engineering geology and eduction.

6. Before submitting your requirements, would you be kind enough to include any matters relating to water-supply, dams, building materials, etc., on which your Public Works Department may want advice.

7. When possible we assist local museums and Colleges with small collections of minerals, etc., and the Geological Adviser may give popular lectures to elucidate certain subject.

(Below copies of letters from the Director, Geological Survey of India, Nos.6195 and 6208, both dated 18th May 1940).

Urgent.

No.1973-G.

Revenue Department.

Bombay Castle, 24th May 1940.

Copies forwarded to the Public Works Department for disposal so far as it is concerned.

2. The letters will be dealt with in the Revenue Department from the point of view of developing mineral resources.

3. Attention is invited to the memorandum from the Revenue Department, No.1281-G/39, dated 14th August 1939.

By order of the Governor of Bombay,

Id.

For Under Secretary to the Government of Bombay,

Revenue Department.

3898/36
11763

E.B. P.W.D.

The draft put up may issue in the first instance, if appd. After issue of the draft the papers will be submitted to the Secretary for information.

Id.
29-5-40 Through W.I.M.& C.BVS.

Id.
29-5-40

In connection with water Supply, we had consulted G.S.(Director) if they had any information on the subject of Deep Underground supplies in the Bhal and Bahra areas of Gujerat. Please put up the Correspondence. -

V.Urgent.

Id.
31-5-40

To
I.B.

To please put up the papers refd. to by D.S. (I x R) and submit through E.B.

3898/36
11763

Below copies of Govt. R.D. No.1973-G, dated the 24-5-40 and its accompts.

Urgent.

No.3898/36-E
Public Works Department
B.C. 1st June 1940.

Copies Forwarded with complements to
the S.E.s of circles,
the Sp. Engr. to Govt.
the C.P.H. Engr. to Govt.

With reference to Govt. Revenue Department No. 1281-G/39, dated the 14-8-39, for favour of report whether they have any matters on which the advice of the Geological Survey of India is required, vide in this connection paras 4 & 6 of the letter No.6208 dated the 18-5-40 from the Div. G.S. of India.

Id.
29-5-40

By order of the G. of B.

Issue and submit to Secretary for information.

Id.
31-5-40

E.B.

P. W. D.

The memo overleaf having issued the papers are submitted for the information of the Secretary.

Id.
3-6-40

Id.
8-6-40

Seen

If they go to Dharwar they might be consulted as to possibility of any site with sound rock for Ozaza Dam.

Id.
10-6-40

Urgent. No. 4025 of 1940.

From

R.A.Collett. Esqr., M.Inst. C.E., M.R.San.I., M.Inst.W.

CONSULTING PUBLIC HEALTH ENGINEER
TO GOVERNMENT, BOMBAY,
Post Box No.39, Poona;

To

The Secretary to Government,
Public Works Department, Bombay.

Poona 25th June 1940.

Subject:- Programme for 1940-41 of the Geological Servey of India.

Sir,

With reference to your No.3898/36-E, dated the 1st June 1940, I have the honour to inform you that I shall be glad to discuss with Government of India's Geological Adviser to the Bombay Province, when he visits this area, the problems of sub-tarranian water supplies and suitable foundations for dams for impounding reservoirs for town water supplies, specially in the survey areas of the Deccan and the Karnatic.

2. For the present, I shall be glad to have his advice on the following items and the Director General of Geological Survey for India may please be requested to include these in his programme for the year 1940-41.

(1) Foundation for masonry dam in the Deccan Trap for storage reservoir for Nasik Water Supply.

(2) Sub-terranean water carried through fissured rock, as well as foundations of dam at Nipani in Belgaum District.

(3) The Sub-terranean water at Matheran, District Thana in the Deccan Trap well.

I have the honour to be,
Sir,
Your most obedient servant,

Id.

Consulting Public Health Engineer to Government.

Enc:- nil.

Id.
20-6

No.G.R.103.

Public Works Department,
Belgaum, 25th June 1940.

From

L. E. Greening, Esquire, I.S.E.,
Superintending Engineer,
Southern Circle.

To

The Secretary to Government,
Public Works Department,
BOMBAY.

Subject:-Field season programme of the Geological survey of India for 1940-41.

Sir,

With reference to Government endorsement No. 3898/36-E, dated the 1st June 1940, on the subject noted above, I have the honour to state that if it is convenient to the Geological Officer, he may be requested to offer his advice with regard to the proposed masonry dam on the Malaprabha river at Asoga near Khanapur in the Belgaum Division, boring operations in connection with which have been ordered to be discontinued, vide Government Memorandum No.2723/36-I, dated the 3rd June 1940.

2. The cores from the borings are stacked near the site and the Geological Officer may be able to say on inspection as to the possible geological formation.

3. Such a suggestion is only made if, during the course of his tour, the Geological Officer happens to be in the vicinity of Belgaum, since a special visit is scarcely justified at this stage.

4. Other than this, there are no other matters in this Circle, in which advice is required.

I have the honour to be,
Sir,
Your most obedient servant,

L. E. Greening 25/6/40.

V.M.T.

Superintending Engineer, S.C.

EB 26/6

PUBLIC WORKS DEPARTMENT
File No. 3898/36
26 JUN 1940
Serial No. 13718

No. 4134 of 1940

From

R.A.Collett, Esq., M.Inst.C.E., M.R.San.I., M.Inst.W.E.,

CONSULTING PUBLIC HEALTH ENGINEER
TO GOVERNMENT, BOMBAY,
Post Box No.39, Poona;

To

The Secretary to Government,
Public Works Department,
BOMBAY.

Poona, 25th June 1940

Subject:- Programme for 1940-41 of the Director General of the Geological Survey of India.

.....

Sir,

With reference to Government Express letter No. 3898/36-E, dated the 20th instant, I have the honour to report that my reply to the original Government reference has been submitted to Government under this office No. 4025 dated the 20th June 1940, wherein I have suggested for inclusion in the Director's programme of the following items:-

(i) Foundation of for masonry dam in the Deccan Trap for storage reservoir for Nasik Water Supply.

(ii) Sub-terranean water carried through fissured rock, and foundations of dam at Nipani in - Belgaum district.

(iii) Sub-terranean water at Matheran (Thana District) in the Deccan Trap well.

I have the honour to be,
Sir,
Your most obedient servant,

Id.

Consulting Public Health
Engineer to Government.

Encl: Nil.

3898/36/13786.

E.B.

Submitted with ref. to Govt.Endt. No.3898/36-E, dated the 1-6-1940.

2. The Dir., Geological Survey of India, has requested this Govt. to inform him of matters which may be included in the field programme of work of the Geological Survey of India for 1940-41 and has added that he contemplates placing an officer of the Geological Survey of India at the disposal of this Govt. as Geological Adviser who will be in charge of the investigations during 1940-41. The information is required by him not later than the 1st week of July 1940. The local officers reports called for in that connection indicate that there are no points in the El. Circle and in the Northern Circle on which the advice of the Geological Survey of India is required. The Proposals made by other officers are noted below and the requisite draft reply to the Dir. will be put up on receipt of orders on those proposals.

Id.
29-6-40 Thro' I.B. and M.B.

I.B.

3. The S.E., D.I.C., states that the advice of the Geological Survey of India is required only by the Ex.Engr., Poona Irriga. & Research Dn., in connection with the location of Gypsum in the Deccan and that if the Geological Adviser visits this part of India he could be consulted as regards the Geological terms for the various soil and sub-soil materials indentified and named by the Irriga. Reserach Dn. about the formation of the black soil or regur. It is for orders whether this item (viz. Location of Gypsum in the Deccan) may be recommended for inclusion in the field programme of the Geological Survey of India.

See A on Resume

4. The S.E.,S.C., recommends that the advice of the Geological officer may be taken in con. with the proposed masonry dam on the Malaprabha River at Asogan near Khanapur in the Belgaum Dn.

See B on Resume

This is the function of the

Soil Scientists.

- Published Materaal on "Regur" formation etc., is more than what Irrigation & Argiculture will ~~xxxx~~ ever need. Moreover, Geological Survey does not deal with this.

Id.
1-7-40

A

B | This is the only important item that should be referred to the Geological Survey people.

Id.
1-7-40

This work may be recommended for inclusion in the field programme of Geological Survey of India - vide also Secy.'s note dated 10-6-40.

5. The S.E.,C.C., states that no advice of the Geological Adviser is required on any of the works in his jurisdiction except in the case of the "Ajnuj" Tank in the Satara Dt. on which about Rs. 70,000 have been so far spent but which allows no irrign. as yet due to serious leakages. In this connection the S.E. has submitted copies of the two notes prepared in his office to enable Govt. to decide whether the case be sent up to the Geological Adviser for investigation and advice. It is for orders what action should be taken in the matter.

Id.
1-7-40

6. The C.P.H.E. to Govt. would be glad to have the advice of the Geological Adviser on the following items and desires that the Dir. General of Geological Survey may be requested to include these in the field programme for 1940-41.

(1) Foundation for masonry dam in the Deccan Trap for storage reservoir for Nasik Water Supply.

(2) Sub-terranean water carried thro' fissured rock, as well as foundations of dam at Nipani in Belgaum Districts.

(3) The Sub-terranean water at Matheran, District Thana in the Deccan Trap Well

It is for consideration whether these items may be recommended for inclusion in the field programme of the Geological Survey of India for 1940-41.

Id.
1-7-40

C.P.H.E's items:-

Nasik -- The S.E., D.I.C.'s office can give all the information needed. There is no dearth of good dam sits for Nasik Water ~~Supply~~ Supply Project.

(2) I cannot find any definite problem in this which would be suitable for Geological Survey's work for Bombay.

(3) It is best not to look for "Subterranean" water at Matheran. Trap fissures are useful pockets but unreliable.

Only 'A' at p.40 may be referred to the G.S. of India as settled earlier.

Id.
1-7-40

As 'A ~~at~~ p. 40 also (2) and (3) C.P.H.E., letter. Re (2) suitable depth flow office might be done to a 'fault'. Re (3) As possible and tap them an ~~spring~~ it may be

To

I.B. & M.B. to please deal this case further.

E.B. is such concerned.

Id.
3-7-40

I.B. & M.B.

Resubmitted with a draft for approval.

Thro. N.G.

Id.
4-7-40.

3898/36.

No.3898/36-L

P. W. D., B.C., 5th July 1940.

To

The Director,
Geological Survey of India.

Subject:- Field Season programme of the Geological Survey of India for 1940-41.

Sir,

I am directed to refer to your letter No.6298, dated 18-5-40, and to request that the following items may kindly be included in the field programme of the Geological Survey of India for the year 1940-41:-

(1) Possibility of the existence of a suitable site with sound rock for founding a high masonry dam at Asoga, Dist. Belgaum.

(2) Investigations re:sub-terranean water carried through fissured rock and foundations for a dam at Nipani in the Belgaum Dist.

(3) The possibility of tapping sub-terranean water at Matheran Hill Station (Kolaba Dist.) in the Deccan Trap area.

I have etc.,
S.E., S.C.,
C.P.W.E. to G.
G.R.108

Copy forwarded to the with ref. to his letter No. 4134 dated the 25-6-40.

Copy forwarded to the R.D. with ref. to its endt. No.1973.G, dated the 24-5-40 for information.

Id.
4-7-40

3898/36.

(M.B.)

Resubmitted.

2. In its file 1973.IV the R.D. has brought to the notice of this Deptt. that Malthuan (vide item 3 in the G.L. overpage) is in the Kolaba Dt. as shown and not in the Thana Dt. as shown in the G.L. The Dir. G,S. of India may be informed in the A draft letter is ppt up accordingly for approval.

Id.
10-7-40.

No. 3898/36

P.W.D., B.C. 11th July 1940.

To

The Director,
Geological Surveys of India.

Subject:- (Please see overpage.)

Sir,

With reference to item (3) of this Deptt. letter No. 3898/36-I dated the 5-7-40, on the subject mentioned above, I am directed to inform you that Matheran Hill Station is in the Kolaba Dt. and not in the Thana Dt. as shown therein.

I have etc.

Id.
11-7-40

No. 431 of 1941

From

R.A.Collett, Esquire, ,.Inst.C.E.

CONSULTING PUBLIC HEALTH ENGINEER
TO GOVERNMENT, BOMBAY,
Post Box No.39, Poona;

To

The Secretary to Government,
Public Works Department,
Secretariat, Fort, Bombay.

Poona 24th January 1941.

Subject:- Inspection tour of Dr. J.A.Dunn,
Superintending Geologist, --
Geological Survey of India.

Sir,

With reference to Government Memorandum, Public Works Department's No.3898/36-M, dated the 22nd January 1941, I have the hounour to state as under:-

2. On receipt of Dr. J.A.Dunn's tour programme for inspection of sites, I shall depute my assistant to render him assistance for his inspection of the sites.

3. The places to be visited will be as under mentioned in my No.4025, dated the 20th June 1940. :-

(1) Nasik for foundations of storage reseroir dam at Chakratirth.

(2) Nipani in Belgaum District for foundations of a storage reservoir dam, and general advise for -- sub-terranean water carried through fissured rocks.

(3) Sub-terranean water bearing strata at Matheran in the Deccan Trap Rock and at Kalol in Panch Mahals.

4. After the inspection of sites by Dr. J.A.Dunn I shall discuss with him the general situations of water bearing strata and the requisitesfor dam foundations.

I have the honour to be,
Sir,
Your most obedient servant,

Id.

Enc: Nil.

Consulting Public Health
Engineer to Government.

No.

From

Dr. J.A. Dunn, D.Sc., D.I.C., F.G.S.,F.N.I.,

GEOLOGICAL SURVEY OF INDIA,
Superintending Geologist,

To

The Chief Engineer,
Public Works Department,
BOMBAY.

Dated Calcutta, 27th February 1941.

(Camp Gogha).

Sir,

I have the honour to enclose copies or my reports on the following :-

1. Asoga dam project, Belgaum district. (2 copies).
2. Water supply of Nipani, Belgaum District.(1 copy
3. Matheran Water Supply. (1 copy),
4. Nasik Water Supply. (1 copy),
5. Kalol Borehole. (1 copy),

Copies of reports on projects 2-5 have been already handed to the Consulting Public Health Engineer.

I have the honour to be,

Sir,

Your most obedient servant.

Id.

Superintending Geologist.

(It is requested that in any further communications on this subject, the No. and date may be quoted and the letter addressed to - "The Director, Geological Survey of India".)

No.2103/398

From DR. Cyril S. Fox, D.Sc., M.I.Min.E., F.G.S.,

Director,

GEOLOGICAL SURVEY OF INDIA

To

The Deputy Secretary to the Government of Bombay,
Public Works Department,
Bombay Castle.

Dated Calcutta, 7th March 1941.

Sir,

I have the honour to inform you that the investigations desired in your letter No.3898/36. I dated the 5th July 1940, have been made by Dr.J.A.Dunn, Superintending Geologist, Geological Survey of India and the following reports have beenn submitted already by him to the Chief Engineer, Public Works Department, Bombay:-

1. Asoga dam project, Belgaum District.
2. Water Supply of Nipani,
3. Matheran Water Supply,
4. Nasik Water Supply.
5. Kalol borehole.

Another investigation in connection with the Water Suppy of Belgaum Cantonment was carried by Dr. Dunn at the request of Lt. Col. W.V.Clark, Commanding Belgaum, and the report thereof was also submitted to him by Dr. Dunn.

I have the honour to be,

Sir,

Your most obedient servant,

Sd/- Syril S. Fox.

Director,
Geological Survey of India.

(M.B.)

Submitted with ref. to G.L. No. 3898/36-I, dated the 5-7-40.

2. Copies of the reports by Dr. J.A. Dunn on the schemes investigated by him have been received and placed on the respective files, The necessary action thereon is being taken separately and no further action is necessary so far as these papers are concerned.

Thro' I.B.

Id.
24-3-41.

Copy of letter No.3703, dated 30th April 1941, from the Director, Geological Survey of India

Subject:-Field Season programme of the Geological Survey of India for 1941-42.

I have the honour to state that the programme of the Geological Survey of India for the coming field season 1941-42 is now under consideration and would request that I may kindly be informed not later than the first week of July 1941 if there is any special investigation that your Government desire to be included in the programme. Proposals of any new work to be considered may please be sent on to me as soon as they have been received by you.

Copy of letter No.3714, dated 30th April 1941, from the Director, Geological Survey of India.

Subject:-Field Season Programme of the Geological Survey of India for 1941-42.

I have the honour to draw your attention to my letter No.3703 dated the 30-4-1941, and to the question of Geological advice which your Government may require during the season 1941-42 the field work for which begins in October.

2. I will be preparing the field programme of work for the Geological Survey of India for 1941-42 in June and will be very pleased to consider any work that you desire carried out by this Department.

3. May I add that I contemplate placing an officer of the Geological Survey of India at the disposal of your Government as Geological Adviser who will be in charge of the investigation during 1941-42.

4. Any work that we can undertake will be done as early as possible, according to its importance, and that no charge will be made for it if it is included in our field season programme.

5. I would remind you that though we at present concentrate on assisting in the discovery and development of mineral deposits we also deal with problems of engineering, geology and educational matters.

6. Before submitting your requirements would you be kind enough to include any matters relaing to water-supply, dams, building materials, etc., on which your Public Works Department may want advice.

(Below copies of letters from the Director, Geological Survey of India, Nos.3703 and 3714, both dated 30the April 1941)

Urgent.

No.1973-G.

Revenue Department,

Bombay Castle, 23rd May 1941.

Copies forwarded to the Public Works Department for disposal so far as it is concerned.

2. The letters will be dealt with in the Revenue Department from the point of view of developing mineral resources.

3. Attention is invited to the memorandum from the Revenue Department, No.1281-G/39, dated 14th August 1939.

Sd.

For Secretary to the Government of Bombay,

Revenue Department.

3898/36
10018

(Below copies of Govt. Endt., R.D., No. 1973-G., dated the 23-5-41 and its accompts.)

URGENT.

No.3898/36-I

P.W.D.,B.C. 28th May 1941.

Copies forwarded, with compliments, to -

the S.Es. of Circles,
the El.Engr. to Govt.
and
the C.P.H.Engr. to Govt.

With ref. to G.M.,R.D., No.1281/G/39., dated the 14th August 1939, for favour of report whether they have any important matters on which the advice of the Geological Survey of India is required - vide in this connection, paras. 4 and 6 of the letter No.3714, dated the 30-4-41, from the Director, Geological Survey of India.

By order of the G. of B.

Id.
26-5-41

Issue & then submit to the Secy. for information.

Id.
27-5-41.

I.B.

Resubmitted, after issue, to the Secy. for information.

Id.

No. 3900 of 1941.

From

R.A. Collett, Esquire, M.Inst. C.E.

CONSULTING PUBLIC HELATH ENGINEER
TO GOVERNMENT, BOMBAY,
Post Box No.39, Poona;

To

The Secretary to Government,
Public Works Department, BOMBAY.

Poona 31st May 1941.

Subject:- Field season programme of work for Geological Survey of India for 1941 and 1942.

....

Sir,

With reference to G.M. No. 3898/36-I, P.W.D., dated 28th May 1941, I have the honour to state that the Director, Geological Survey of India, may please be requested to include the visits to the following towns in the Province in their programme for 1941-42:-

(1) Islampur (District Satara) for water supply.

(2) Dharwar (District Dharwar) for water supply.

(3) Hubli (District Dharwar) for water supply.

(4) Satara (District Satara) for water supply.

(5) Godhra (District Broach & Panch Mahals) for water Supply.

I have the honour to be
Sir,
Your most obedient servant,

Id.

Encl: Nil

Consulting Public Health
Engineer to Government.

Id.

No.G.R.103. Public Works Department,
Belgaum, 23rd June 1941.

From

L. E. Greening, Esquire, I.S.E.,
Superintending Engineer,
Southern Circle.

To

The Secretary to Government,
Public Works Department,
B O M B A Y.

Subject:-Field Season Programme of the Geological Survey of India for 1941-42.

Sir,

With reference to Government endorsement No. C.I 3898/36-I, dated the 28th May 1941 and subsequent expeditor No. C 12 3898/36-I-1, dated the 19th June 1941, I have the honour to state that in this Circle, there are no important matters on which the advice of the Geological Survey of India is required, other than perhaps the selection of the site of the dam in connection with the Belgaum Water Supply (Municipal) project.

A Revised survey is for the project has been received and is under submission to this...

2. As the plans and estimates are now being prepared by the Executive Engineer, Belgaum Division, under the supervision of the Consulting Public Health Engineer to Government, it would be necessary for the Geological Survey to give an opinion at the earliest date possible, in order that it may be possible to embody, recommendations, if made, in the project before its submission to Government.

3. It may be stated that it is very desirable that this project, which is of long standing date, should be completed as early as possible, and not therefore be subjected to further delay as the need

for

for a water supply to Belgaum is very keenly felt.

I have the honour to be,

Sir,

Your most obedient servant,

L. C. Greenwood

V.M.T. Superintending Engineer, S.C. 23/6/41.

(J.B.)

Submitted with reference to Govt. Endt. at p. 7 ante.

2. The receipt of reports from the S. Es., N., C. & D. 9. Circles may be awaited till the end of this month.

B.R.J. 7.6.41. Thro. M.B.

24/6/41

A.S.

Secy. 3898/36
24 JUN 1941
12103

Post Box No. URGENT. No.G.98/5529 of 1941.

Telephone No. OFFICE OF THE SUPERINTENDING ENGINEER,

Northern Circle:

P.W.D., Bombay, dated 27th June 1941.

From

G.D.Daftary, Esquire, I.S.E., J.P.,

SUPERINTENDING ENGINEER,
Northern Circle:

To

The Secretary to Government,

Public Works Department,

BOMBAY.

Subject:- Field season programme of the Geological Survey of India 1941-1942.

Sir,

With reference to Government Endorsement, P.W.D., No.3898/36.I, dated 28th May 1941, and subsequent reminder dated 19th instant, I have the honour to state that there are no points, except the following on which advice of the Geological Surgey of India may be obtained:-

(1) Survey of the nature of the sub soil strata in alluvial areas of Gujarat for collection of data about the yield and quality of the water bearing strata at various depths.

(2) Possibility of obtaining supply of drinking water by resorting to deep bore wells in the areas round about the creeks in Panvel Sub-division (Kolaba District) where the sub Soil water is saltish and hence not useful for drinking purposes.

I have the honour to be,
Sir,
Your most obedient servant,

Id.

Superintending Engineer,
Northern Circle.

No.1973-G.
Revenue Department.
Bombay Castle, 25th June 1941.

From

V.S. Bhide, Esquire, I.C.S.,
Secretary to the Government of Bombay,
Revenue Department;

To

The Director,
Geological Survey of India.

Subject:-Geological Survey.
Programme of - for field season of 1941-42.

Sir,

With reference to your letters Nos.3703 and 3714, dated 30th April 1941, I am directed to request that the investigation of China clay deposits in Belgaum and Broach and Panch Mahals districts in the Province of Bombay may be included in the survey programme of your Department for the field season of 1941-42. A preliminary survey of these deposits has been made and the data so collected have been compiled in a departmental bulletin, which is now being printed. A copy of it will be forwarded to your Department direct by the Director of Industries, Bombay.

2. I am to add that if there is any problem of engineering geology or geological education to be referred to you, a separate communication will be addressed in that connection.

I have the honour to be,
Sir,
Your most obedient servant,

F.H.Devitre,
For Secretary to the Government of Bombay,
Revenue Department.

No.

No.G.R.103

Public Works Department,
Belgaum, 4th July 1941.

From

L.E.Greening, Esquire, I.S.E.,
Superintending Engineer,
Southern Circle.

To

The Secretary to Government,
Public Works Department,
BOMBAY.

Subject:- Field Season Programme of the Geological Survey of India for 1941-42.

Sir,

In continuation of this office No.G.R.103, dated the 23rd June 1941, I have the honour to state that the Consulting Public Health Engineer is of the opinion and I concur that the data collected hitherto as regards the site for the dam of the Belgaum Water Supply Project should be sent to the Geological Department now.

2. It is believed that the Superintending Geologist Dr.Dunn who has inspected the Belgaum area will be able to express an opinion as regards the foundations of the proposed dam.

3. Formal sanction to the procedure contemplated is requested.

I have the honour to be,
Sir,
Your most obedient servant,

L. E. Greening

Superintending Engineer, S.C.
4.7.41

B.V.G.

1081

PUBLIC WORKS DEPARTMENT
File No. 3898/36
7- JUL. 1941
Serial No. 1297

No.3898/36-M

P.W.D., B.C., 12th July 1941.

To

The Director,

Geological Survey of India.

Subject:- Field Season Programme of the Geological Survey of India for 1941-42.

Sir,

I am directed to refer to your letter No.3714, dated the 30-4-1941, addressed to the Rev.Deptt. and to request that the following items may kindly be included in the field programme of the Geological Survey of India for the year 1941-42 :-

(1) Investigation of a suitable site for a water supply project for -

(i) Islampur (Dist.Satara).

(ii) Satara (Dist.Satara).

(iii) Hubli (Dist.Dharwar).

(iv) Godhra (Dist.Broach and Panch Mahals).

(2) Selection of the site of the dam in con. with the Belgaum Water Supply.

(Dist.Belgaum).

The necessary data will be sent direct by the S.E., S.C., the matter being urgent. It is believed that the Superintending Geologist (Dr.Dunn) who has already inspected the Belgaum area may be able to express an opinion as regards the foundation of the proposed dam.

(3) Possibility of obtaining drinking water supply from deep bore wells in the areas round about the creeks in Panvel Sub.Dn. (Kolaba Dist.), where the sub-soil water is saltish and hence not useful for drinking purposes.

I have etc. Copy.....

3898/36.

Copy forwarded for information

to--

the C.P.H.E. to Govt. with ref. to his letter No.3900, dated the 31-5-41;

the S.E., N.C., with ref. to his letter No.G, 98/5529 dated the 27-6-41.

the S.E., S.C., with ref. to his letter No.G.R.103, dated the 4-7-41.

2. The necessary data re: item (2) above should be sent direct by the S.E. , S.C., to the Dir. now. The S.E., is requested to report whether the Bijapur areas have ever been investigated for deep borens

---

Copy forwarded to the R.D. for information with ref. to its endt. No. 1973-G, dated the 23-5-41.

Id.
11-7-41.

(It is requested that in any further communication on this subject, the No. and date may be quoted and the letter addressed to -
" The Director, Geological Survey of India".)

No. 5806.

From Dr. Cyril S. Fox, D.Sc., M.I.Min.E., F.G.S.,

DIRECTOR,

GEOLOGICAL SURVEY OF INDIA,

To

C.E. Aitken, Esq., C.I.E., I.S.E.,
Secretary to the Government of Bombay,
Public Works Department Division,
Bombay.

Dated Calcutta, 2-8-41.

Sir,

I have the honour to acknowledge receipt of your letter No.3898/36 M, dated the 12th July 1941, and to say that the investigations desired will, as far as possible, be included in the field programme of the Geological Survey for the year 1941-42. In this connection I would request that, as these investigations are to be made expressly on behalf of the Bombay Government arrangements be made by your Department for the use of the bungalows occupied by the Geological Survey officer concerned on the same terms of fees etc. as for local officers of the Provincial Government, vide this office letter No. 5245/987 dated 10th July 1941. During the previous season, Dr. Dunn, whilst engaged on work for your Department, had to bear the additional expense of discreminatory theatment as Central Government officer, and this has given rise to discussion which is not yet satisfactorily settled.

I have the honour to be,
Sir,
Your most obedient servant,

Id.

Director,
Geological Survey of India.

3898/36

(Extract from letter No.5806, dated 2-8-41 from the Dir. G.S. of India.)

No. 3898/36-M

P. W. D.

B.C., 13th August 1941.

Extract forwarded to -

The S.E. G.C.

The S.E., S.C.

The C.& H.E. to Govt.

for information with reference to G.E. No. 3898/36-M dated the 12-7-41.

2. The attention of the S.E. S.C. is invited to para 2 of the Govt. endt. quoted above and he is informed that the report called for therein is awaited.

By order etc.

Id.
8-8-41.

U.O.R. to R.D. dated the 19-8-41.

Expedited the S.E. S.C, with reference to para. 2 of the G.E. endt. under No. 3898/36-M, dated the 13th October 1941.

Issued.

13-10-41.

No.G.R.103

Public Works Department,
Belgaum, 16th October 1941.

From

L.E.Greening, Esquire, I.S.E.,
Superintending Engineer,
Southern Circle.

To

The Secretary to Government,
Public Works Department,
B O M B A Y.

Subject:- Field Season Programme of the Geological Survey of India for 1941-42.

Sir,

With reference to Government Endorsement No. 3898/36.M, dated the 12th July 1941, I have the honour to report that the necessary data as regards the selection of the site of the dam in connection with the Belgaum Water Supply (District Belgaum) was sent to the Director, Geological Survey of India direct on the 30th July 1941 and the opinion of Dr.Dunn has been obtained on the 6th September 1941.

2. A decision on the selection of the site for the dam has since been reached.

3. As regards the Bijapur areas, it is reported that they have not hitherto been investigated for deep bores and it is considered that the subject may be referred for Geological opinion.

I have the honour to be,
Sir,
Your most obedient servant,

L.E.Greening 16.10.41.

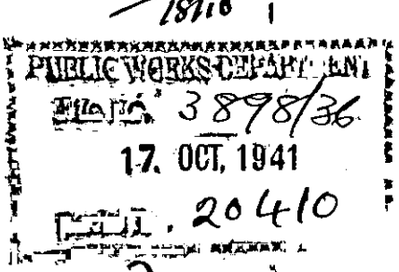
B.V.G.

Superintending Engineer,S.C.

(For disposal; pl see page 55 post)

8/18/10 1

MB 22/10



17

5-7

Copy of letter from the Director, Geological Survey of India, No.8676/398, dated 1st November 1941.

Subject:-Field Season programme of the Geological Survey of India 1941-42.

I have the honour to inform you that with the approval of the Government of India Dr. M. R. Sahni, Geologist, is placed in charge of the geological work in Bombay and will act as mineral adviser to the Government of Bombay.

2. Dr. Sahni will investigate the following pressing water supply and storage problems:-Islampur, Satara, Hubli Godhra and perhaps Belgaum, which it is possible I may attend to personally, and also on the sub-soil water in Panvel subdivision of Kolaba.

3. Dr. Sahni will also examine (1) the carnelian and agate occurrence in Rajpipla State (2) bauxite deposits at Kim in Surat and the calcareous laterites of Bhawanagar and elsewhere in Kathiawar.

4. Dr. Dunn, Superintending Geologist, may make a special examination of the old copper mines of Kumbharia, Danta State as this is properly a part of the investigations proposed to be undertaken in the Rajputana States.

5. As we are short of officers it is possible that Dr. Sahni may have to carry out investigations for the Government of Sind. In this case Mr. Burjor Mehta, post graduate scholar, will work in Bombay Province with Dr. Sahni.

6. I would therefore request that with the permission of His Excellency the Governor, the local authorities may be instructed to render the above officers such facilities as they may require in the furtherance of their work. They will communicate to the local officers concerned the probable dates of their arrival and further details of their tours.

3898/36.

(Below copy of letter No.8676/398, dated 1-11-1941, from the Director, Geological Survey of India.)

No.3898/36-M.

P.W.D., B.C., 24th Novr. 1941.

Copy forwarded for information with refce. to G.E.No.3898/36-M, dated 12-7-41, to

the S.E.N.C.,
the S.E., S.C.,
the C.P.H.E., to Govt.

2. Necy. facilities should ~~be~~ please be given to the officers of the Geological Sruvey of India in the furtherance of their work.

By order of the Govr. of Bombay,

Id.
21-4-41.

63

Letter No.10035, dated the 18th December 1941, from the Director, Geological Survey of India, Calcutta, to the Superintending Engineer, Southern Circle, Belgaum.

*****

1867

"With reference to letter No.3898/36-M dated the 9th December 1941, from the Government of Bombay to my address (copy enclosed) I have the honour to request you kindly to let me know the purpose for which the deep boring is intended. Is it in connection with the water supply problem?

.....

No.G.R.103

Public Works Department,
Belgaum, 3rd January 1942.

From

L.E.Greening, Esquire, I.S.E.,
Superintending Engineer, S.C.

To

The Director,
Geological Survey of India,
C A L C U T T A.

Subject:- Field Season Programme of the Geological Survey of India for 1941-42.

Sir,

With reference to your letter No.10035/A 71, dated the 18th December 1941, I have the honour to state that the deep boring is intended in connection with the water supply problem.

I have the honour to be,
Sir,
Your most obedient servant,

L.E.Greening 3.1.42

Superintending Engineer,S.C.

B.V.G.

Copy...

3898/36
435

+ 1545 /42/

Copy with a copy of the letter under reply

forwarded, with compliments, to -

(1) The Secretary to Government, Public Works Department, Bombay.

(2) The Executive Engineer, Bijapur Division, with reference to this office endorsement No. G.R.103, dated the 15th December 1941.

(M. G.) Submitted for information with refce. to P.W.D. No. 3898/36-M, d. 9-12-41. 1607

Record.

A.M. 19/12/42.

MB 6/1

8. 5/1/42

PUBLIC WORKS DEPARTMENT
File No. 3898/36
5 JAN. 1942
Serial No. 435

9-1-43.

No. 3898/36-I

P. W. D.

B.C. 11th July 1942.

To

The Director,

Geological Survey of India.

Subject:- Field Season Programme of the Geological Survey of India for 1942-43.

Sir,

With reference to your letters Nos. 6972/398 and 6989/398, dated the 27-6-42, I am directed to ~~in~~vite your attention to the correspondence noted in the margin and to request ~~me~~ you kindly to include in the current Year's field season programme of the Geological Survey of India, the following items in the last year's programme if they have not already been investigated last year:-

*(1) G.L; P.W.D. No.3898/36-M dated 12-7-41, to the Director, G.S. of India.
(2) Letter from the Director, G.S. of India, to the Secy. to the Govt. of B. P.W.D., No.5806, dated 2-8-41.
(3) Para. 2 of letter from the Director, G.S. of India, No.8676/398, dated 1-11-41.

(1) Investigation of suitable sites for water supply projects for -

(a) Islampur (Dist. Satara)

(b) Satara (Dist. Satara)

(c) Hubli (Dist. Dharwar)

(d) Godhra (Dist. Broach and Panch Mahals).

2. Possibility of obtainting drinking water supply ~~fro~~ from deep bore wells in the areas round about the creeks in Panvel Sub-Dn. (Kolaba Dist.) where subsoil water is saltish and hence not useful for drinking p purposes.

Id.
10-7-42

Your obedient servant,

Copy forwarded for information to the C.P.H.Engr. to S.E.N.C. Government with reference to his letter No. -- No.M.-S.-21-26A 5959, , dated 8-7-42.

Copy forwarded to the ~~R.D.~~ R.D. / E.D. with reference to its endt. No. 1973G / S. 14-4266 E, dated 6-7-42. / 9-7-42

14/8/42

The Bhatwadi site for a dam across the Malaprabha river near Asoga was rejected as the rock which was struck 20' below the bed of the river, was of a light micacious variety of granite with intrusions of quartz. 20' is not a great depth for foundations of such a dam and it is not improbable that sounder rock may underlie the variety met with at 20' depth. Horizontal intrusions of quartz veins may perhaps be got over by taking the founds lower down unless the whole rock is criss-crossed by such veins. The site otherwise appears to be a very good one except that there is no suitable place for the conventional type of waste weir. In many of the high dams built or being built in the U.S.A. in recent times, syphon or overflow type of waste weirs are adopted and it is not likely that there will be insurmountable difficulty in adopting a suitable safe type of w.w. in the present case.

2. Three bores have been taken at the Bhatwadi site and the cores are presumably available with the Ex.Engr. It is suggested that the S.E. may be requested to include in the next programme of inspection by the Geological Survey the item of inspection of the Bhatwadi site and the core samples of bores taken thereon.

I see no objection to this being done
11/2/43

3. For previous noting on the subject pl. see pp.41-48 of file No.2723/36/IV and pp.69-70 of file 2723/36/III placed below.

KVB.10.2.

10/2/43

11/2/43

Letter.

No.3898/36-I. P. W. D.
B.C., 13. Feby. 1943.

To

The S.E., S.C.

Subject: Site for a dam across the Malaprabha river near Asoga.

...

Reference: Your letter No.M.I.9, dated 29-5-41.

2. ~~You are requested~~ It may be desirable to include in the next programme of the Geological Survey of India the item of inspection of the ~~Bhatwadi~~ Bhatewadi site for a dam across the Malaprabha river near Asoga and the core

Please see 2723/36/IV, p. 41

see if this is Bhatewadi or Bhatwadi
Bhatewadi
SW
11/2

already

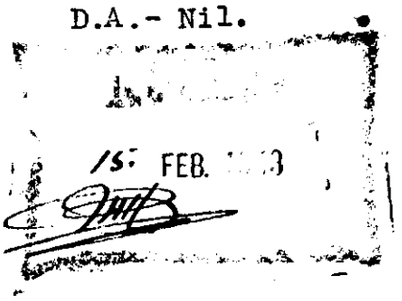
Core samples or bores taken thereon are available for inspection.

By order or the G. or B.

2-2-43.

12/2/43

D.A.- Nil.



GJP.
12/2

9/10/1943

L E T T E R.

From L.E.Greening, Esquire,I.S.E.,
Superintending Engineer, S.C.

To The Secretary to Government,
Public Works Department, B O M B A Y.

No.M.I.9 Public Works Department,
Belgaum, 19th March 1943.

Subject:- Site for a dam across the Malaprabha river, Asoga.

Reference Government Letter (P.W.D.) No.3898/36-I, dated the 13th February 1943.

2. The core samples of the three bores taken at the Bhutewadi site are available for inspection in the office of the Executive Engineer, Belgaum Division.

3. The item of ispection of the Bhutewadi site may, therefore, be included in the next programme of the Geological Survey of India.

L.E. Greening. 19.3.43.

Superintending Engineer, S.C.

This is due in next July.

B.V.G.

2

3898/36
6418.

(B.) Submitted for information.

2. Para 3 of the S.E.S.C's letter overleaf has been noted.

SRJ
25-3-43.

Await.

24/3/43.

3898/36 P.II

WORKS DEPARTMENT
Fil. No. 3898/36
23. MAR. 1943
Serial No. 6418